MICHIGAN DEPARTMENT OF NATURAL RESOURCES ☐ **DRAFT** ☒ **FINAL**

Forest Certification Work Instruction

Date of Draft Document:

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Work Instruction Title: 2.1 Reforestation

Work Area Group: 2 – Forest Regeneration & Pesticide Use

Purpose: To define forest regeneration requirements on State Forest Land.

Work Instruction:

1. Desired Future Condition:

Forest regeneration will contribute to a distribution of successional stages, age classes, and community types at the appropriate scale and intensity. Silvicultural practices will encourage regeneration that moves the stand toward its desired future condition as determined by the management objective agreed to at compartment review. Broad genetic and species diversity as well as the ecological impacts of planting must also be considered.

Reforestation of difficult to regenerate stands or endemic species will be a consideration when a stand is prescribed for harvest Stand examiners need to make comments in the narrative section of Operations Inventory (OI) reflecting an acceptable species mix should the stand not regenerate to the management objective and this must be agreed to at compartment review. If type conversion occurs without this pre-approval, after-the-fact approval is acceptable. Stands that can not be regenerated to the desired management objective or approved alternative will not have a regeneration harvest prescribed. When desirable advanced regeneration is present within a stand, comments should be included in OI that will lead to the inclusion of relevant timber sale contract specifications and the retention of this regeneration. Management guides and FMFM Reforestation policy should be consulted in these regards as needed. Any regeneration work prescribed and approved will be documented on a Forest Treatment Proposal (FTP) Form R4048 in accordance with the reforestation policy.

2. Indication of Regeneration Method:

Forest inventory codes will be used to determine if a stand will be artificially or naturally regenerated. The OI manual provides guidance, beginning with the method of cut (MOC) section of the manual.

3. Exotics:

The FMFM Reforestation policy addresses the planting of exotic (non-native) species. While the practice is discouraged and minimized, it is not prohibited. The same policy also outlines the documentation required for completion of the Forest Treatment Proposal Completion Report (R4048-1), which is required for all plantings, whether exotic, improved or from another source. All of the plantings must be summarized annually using the Planting Summary (R4046). The Forest Health Specialist in conjunction with the Nursery Manager (tree improvement specialist) and Timber Management Specialist (TMS) is responsible to insure all stock meets policy and legal guidelines. These individuals shall also monitor or participate in any testing or application of improved planting stock or bioengineered species.

4. Timing and Adequacy of Regeneration:

Stands prescribed for final harvest will be regenerated within two growing seasons from the date of the timber cutting report if it is regenerating artificially and within five years if regenerating naturally. A timber cutting report is the document that concludes a Timber Sale Contract.

Whenever a timber cutting report is generated, the contract administrator will update OI. The reforestation clock for regenerating the stands contained within the sale will begin when contract is completed. The Unit Manager will be responsible for the preparation and updating of regeneration lists. Those requiring TMS assistance will be forwarded to the TMS as requested, but at least twice during the year. TMS will be required to provide any available regeneration information, such as shape files, regeneration counts, and FTP Completion Reports (R4048-1) before regeneration lists and OI can be updated.

The TMS will be responsible for completing artificial regeneration within two growing seasons of when the timber sale cutting report was completed or for documenting reasons for non-compliance. This regeneration must be the same type or species mix as agreed to at compartment review. If conditions after harvest are such that regeneration to the approved management objective cannot be obtained, the TMS must seek a change in management objective by going through the post review (change) process outlined in the OI manual, Chapter 7.

Minimum stocking levels will follow the FMFM Reforestation policy or Silvicultural Guidelines, whichever is more stringent.

5. Regeneration Monitoring:

Naturally regenerating stands will be checked by year 4 (4 years after the timber cutting report is completed) to determine if regeneration has been successful. Unit Managers will be responsible for tracking these stands and initiating follow up action in consultation with the TMS by the end of year 4. Artificially regenerating stands will be checked in accordance to the Forest Regeneration Survey Manual or by year 2. Unit Managers are responsible for all reforestation activities on the Unit, however the TMS shares in the responsibility for those stands forwarded to them.

All stands that are prescribed for a regeneration harvest will be progressively sampled. At a minimum each stand will be walked through and checked for adequate regeneration as defined by policy, the Forest Regeneration Survey Manual and the OI manual. The walk through should be well distributed and cover at least 10 percent of the stand area. If regeneration is estimated to be inadequate, a formal survey will be conducted as outlined in the Forest Regeneration Survey Manual. Unit Managers will be responsible for the walk through surveys and for coordinating corrective actions. The TMS will support this effort by making formal survey personnel (either contractors or students) available to conduct the formal survey and to and provide program expertise to insure consistency. Oversight and documentation of these surveys will be the responsibility of the Unit Manager. Survey results must be recorded in OI comments and coding updates. Stands that are found inadequately stocked will be artificially regenerated according to the management objective of the stand as previously described. Plans to accomplish artificial regeneration must be initiated by year 5 if the stand was originally prescribed for natural regeneration. Once the decision is made to switch to artificial regeneration (to be done before the end of year 5), the OI coding will be updated to reflect artificial regeneration and the reforestation clock is updated to reflect a two year artificial regeneration deadline. The TMS assumes responsibility for regenerating the stand once the decision to regenerate artificially has been made.

Regeneration of stands that were treated in previous years must be checked during OI. Stands where accurate seedling count information does not exist and a harvest or cultivation treatment has been completed will be progressively sampled as described above. If necessary the stand may be prescribed for a regeneration count or other cultural work as needed.

Scope: (All State Forest Land and Affected Divisions): ☒ State Forest Land ☐ Other: _____

☒ DNR – FMFM ☒ DNR – Wildlife ☐ DNR – Fish ☐ DNR – Law ☐ DNR – Parks

Responsibility and Role: (Staff who will implement or supervise this instruction)

Job Title/Division	Role
Unit Manager / FMFM	Supervise pre-harvest inventory, determination of stand management objective, and maintenance of related records.
Stand Examiners / FMFM and/or WLD	Conduct pre-harvest inventory, make preliminary stand prescriptions, perform initial natural regeneration assessment, and maintain records.
Timber Management Specialist / FMFM	Supervise & implement artificial regeneration activities, supervise formal artificial and natural regeneration surveys, and provide related records to Unit Managers.
Sale Contract Administrator / FMFM	Protect advance natural regeneration and start the regeneration clock.
Nursery Manager (tree improvement specialist) / FMFM	Ensure that planting stock conforms to polic ies and legal guidelines.
Forest Health Specialist / FMFM	Recommend regeneration practices that minimize forest health impacts, and ensure that planting stock conforms to policies and legal guidelines.

Training/Skills: (Those required to accomplish work instruction)

Item	Brief Description of Skill or Course	Exists / New
OI coding training	Provide clarification and training in coding (paragraph 1 comments)	☒ E ☐ N
Regeneration survey training	Contents of Forest Regeneration Manual	☐ E ☒ N
Knowledge of work instruction	All managers and supervisors with responsibility to implement this work instruction.	☐ E ☒ N
Reforestation Data Base	Use of local reforestation database	☐ E ☒ N
		☐ E ☐ N

References:

- Act 451 1994
- NRC Policy 2204
- FMFM Policy 241
- FMFM Policy 251
- OI manual
- IFMAP Manual
- Forest Regeneration Survey Manual

Monitoring: See section 4 of work instruction (below).

Records:

Completed records are kept in compartment files. Records to include:

- Forest Treatment Proposal (FTP) Form R4048
- Forest Treatment Proposal Completion Report Form R4048-1
- Planting Summary Form R4046
- reforestation database
- reforestation sampling records.
